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Award Number: DAMD17-99-1-9467

TITLE: Soy Supplementation and Prostate Cancer Prevention

PRINCIPAL INVESTIGATOR: Electra D. Paskett, Ph.D.

CONTRACTING ORGANIZATION: The Ohio State University
Columbus, Ohio 43210

REPORT DATE: March 2004

TYPE OF REPORT: Final Addendum

PREPARED FOR: U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Approved for Public Release;
Distribution Unlimited

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 074-0188

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	March 2004	Final Addendum (14 Aug 2001 - 14 Feb 2004)

4. TITLE AND SUBTITLE
Soy Supplementation and Prostate Cancer Prevention

5. FUNDING NUMBERS
DAMD17-99-1-9467

6. AUTHOR(S)
Electra D. Paskett, Ph.D.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
The Ohio State University
Columbus, Ohio 43210

E-Mail: paskett-1@medctr.osu.edu

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for Public Release; Distribution Unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 Words)

This project is conducting randomized double-blind clinical trail to access the ability of a soy protein dietary supplement to reduce prostate cancer risk in older men. A total of 120 men (60 white and 60 African-American aged 50 years or older with high PSA levels but normal prostate biopsies will be randomized into one of two groups (soy protein supplementation with isoflavones or casein protein supplementation). The specific aims are: 1) to determine the impart of the interventions, including changes in clinical (PSA levels and prostate volume) and intermediate (Ki-67, apoptosis, sex-steroid receptors, angiogenesis, antioxidant enzyme expression) markers of prostate cancer risk; 2) to assess soy protein effects on hormone levels, plasma lipids/kipoproteins and blood pressure; and 3) to evaluate changes in health-related quality of life, including urinary symptoms and sexual functioning. This project involves a multidisciplinary team affiliated with the oncology, Epidemiology, health-related quality of life, biostatistics, and nutrition. NCI approved of the CALGB protocol delayed start-up of this study; recruitment has been continuous since March 2000. However, recruitment to this study was suspended during the previous reporting time period per DOD Human Subjects Protection Office. Currently the study is open at 13 Cancer and Leukemia Group B sites.

14. SUBJECT TERMS
Prostate cancer

15. NUMBER OF PAGES
5

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	Unlimited

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INTRODUCTION

This study proposes to conduct a randomized double-blind clinical trial, which will assess the ability of a soy protein dietary supplement (a rich source of isoflavones) to reduce prostate cancer risk in older men. This project involves the collaborative efforts of a multidisciplinary team affiliated with the cooperative group, Cancer and Leukemia Group B (CALGB), which has substantial expertise in the areas of controlled clinical trials, oncology, epidemiology, health-related quality of life, biostatistics, and nutrition. If positive results are obtained in this trial, soy supplementation may provide an important tool for the prevention of prostate cancer.

Soybeans and other legumes contain large amounts of plant estrogens know as isoflavones. Specific isoflavones found in soy (genistein and diadzein) have been implicated in reducing breast, colon, and prostate cancer risk in both laboratory-based and observational studies [1]. Strong evidence for an effect on prostate cancer risk comes from cross-cultural studies, which have shown that prostate cancer rates are much lower in the Pacific Rim countries where soy products comprise a much higher proportion of the normal diet compared to the United States [2]. This project will randomize 120 men (60 white and 60 African-American) aged 55 years and older with high PSA levels but normal prostate biopsies into one of two groups (soy protein supplementation with isoflavones or casein protein supplementations). The specific aims are: 1) to determine the impact of the interventions, including changes in clinical (PSA levels and prostate volume) and intermediate (Ki-67, apoptosis, sex-steroid receptors, angiogenesis, antioxidant enzyme expression) markers of prostate cancer risk [3,4]; 2) to assess soy protein effects on hormone levels, plasma lipids/lipoproteins and blood pressure; and 3) to evaluate changes in health-related quality of life, including urinary symptoms and sexual functioning.

BODY: Accomplishments associated with the approved statement of work.

Task 1:

a. *Continue to seek and obtain annual renewal of the project.*
b. *Wake Forest University School of Medicine (WFUSM) continues to ship the soy and casein supplements received to the participating sites.*
c. *Staff training sessions continue to be held in conjunction with the annual meetings of the CALGB.*
d. *Dr. Paskett presented the study to the members of the CALGB Urology Committee.*

Task 2:

a. *To date, thirteen sites within CALGB have agreed to participate in this project. Additional sites may open the study.*
b. *Due to changes in prostate biopsy procedures we still continue to experience slow recruitment. As noted previously, more biopsy specimens are being gathered during the biopsy procedure, thus more likely than not, if a biopsy is performed, the diagnosis is 90% positive for cancer, reducing our pool of potential participants.*
c. *We are waiting approval of an amendment to change the endpoint from a biopsy to change in PSA levels. Standard of care has change since the protocol was written and many urologists and patients were reluctant to participant in the study due to the need for an end of study biopsy. Please note that this amendment changed was discussed with the DOD Human Subjects Protection Office prior to initiating the change through CALGB/NCI.*

d. *Recruitment continues to be affected because of standing contracts (with pharmaceutical companies), many private urologists are pulling away from the low paying projects (such as ours) to use their patients for the higher revenue-generating projects.*

KEY RESEARCH ACCOMPLISHMENTS

Ohio State University (OSU) continues to be the administrative site for this study. During the last reporting period the study was opened to all CALGB sites, and so far thirteen CALGB sites have obtained their individual Institutional Review Board approvals and have began recruitment. Wake Forest University School of Medicine continues to ship the soy products to all sites. Samples obtained from participants to this point are being batched at Ralston for test to be analyzed collectively. These specimen analyses are being paid for from matching funds that Dr. Paskett secured from OSU. Dr. Paskett has been working with the membership of the Urology Committee of the CALGB to promote the study and to enlist support. We have resolved all of the pending issues with the DOD Human Subject Protection Office, and they lifted the suspension that was placed on recruitment activities. They have granted approval to move forward with the study. All changes to the protocol will be submitted to the Human Subject Protection Office when IRB approved.

REPORTABLE OUTCOMES

None to report

CONCLUSION

Although this should be the final report, we have requested a no cost extension. As noted in previous reports, there have been many factors that have resulted in the delay of this project. However, we are hopeful that with the opening of the study to all CALGB sites and through Dr. Paskett's work with members of the Urology Committee in CALGB to change the study end point from a biopsy to a change in PSA levels, we should see a major increase in our accrual numbers. Please note that risks to subjects have not changed and all sites participating through CALGB has received approval from their local IRBs.

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